UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P O Box 1450
Alexandria, Virginia 22313-1450
www uspto gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,969	09/07/2006	Benoist Sebire	47092.00166	7108

32294 7590 09/30/2009
SQUIRE, SANDERS & DEMPSEY L.L.P.
8000 TOWERS CRESCENT DRIVE
14TH FLOOR
VIENNA, VA 22182-6212

EXAMINER	
PATEL, NIMESH	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
09/30/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,969	SEBIRE, BENOIST	
	Examiner	Art Unit	
	NIMESH PATEL	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 August 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *Aug. 3, 2006*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Detailed Action

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an

invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 11, 18, 26, and 27 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 10 and 17 of U.S. Patent No. 10/655,252. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims in the application are narrower than the ones in Pending Application, Mogensen Application No.: 10,655,252 Jun. 27, 2003 from the SAME ASSIGNEE – Nokia Corporation. In re Van Qrnum and Stang, 214 USPQ 761.

For example, the combination of claims 1, 5, 6 of copending application is similar in scope as claim 1 of the present application.

For example, the combination of claims 10, 14, 15 of copending application is similar in scope as claim 18 of the present application.

For example, the combination of claims 17, 21, 22 of copending application is similar in scope as claim 27 of the present application.

Claims 1, 18 and 27 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 10 and 17 of copending Application No. U.S. Patent No. 10/655,252. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims in the application are narrower than the ones in Pending Application, Mogensen Application No.: 10,655,252 Jun. 27, 2003 from the SAME ASSIGNEE – Nokia Corporation. In re Van Qrnum and Stang, 214 USPQ 761.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Objections

2. Claim 5 is objected to because of the following informalities: It appears that claim 5 depends on claim 1. Appropriate correction is required.

Drawings

3. The drawings are objected to because Figs. 1, 3 – 7 shows only the numbers without labels. The appropriate labels are required to identify corresponding part numbers shown in the figures. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended

drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims rejection – 35 USC 103(a)

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman US Patent: US 6,785,252 B1 Aug. 31, 2004 and in view of Scholefield US Patent: US 5,752,193 May 12, 1998.

Regarding claim 1, Zimmerman discloses,

a scheduling device for scheduling data transmission over a plurality of channels in a data network, said device (self correcting bandwidth request/grant protocol in a broadband wireless communication system – ABSTRACT, Fig. 1/106, column 9, lines 1 – 13. The broadband wireless communication system 100 provides “bandwidth-on-demand” to the plurality of Customer Premises Equipment CPEs 110 – Fig. 1, column 2, lines 17 – 19, column 9, lines 27 - 29), comprising:

a monitoring unit (the base station 106 receives the bandwidth request and grants bandwidth requests reads on the claimed “monitoring unit”, the base station monitors the appropriate bandwidth request contentions slots – ABSTRACT, Fig. 8/814, column 20, lines 13 – 34)

configured to monitor a predetermined parameter indicating a channel capacity in a received data stream of at least one of said plurality of channels (the bandwidth

allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth – Figs. 8/822, 11, 12, 13, column 20, lines 29 – 34, column 21, lines 26 – 51. The base station 106 receives the bandwidth request and grants bandwidth requests and the base station monitors the appropriate bandwidth request contentions slots. The base station 106 checks for the available bandwidth and performs the bandwidth allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth. The amount of bandwidth dedicated to a given service is determined by the information rate and the quality of service required by that service and also taking into account bandwidth availability and other system parameters – Figs. 1, 8/804, column 2, lines 17 - 28. Here, the base station 106 keeps monitoring on the available bandwidth, reads on the claimed feature, monitoring a difference between a used capacity allocation and a scheduled capacity allocation in a received data stream – ABSTRACT, Figs. 8/804, 8/814, 8/822, 11, 12, 13, column 20, lines 13 – 34, column 21, lines 26 – 51. In determining the amount of bandwidth to allocate a particular QoS for a particular CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56) ; and

a scheduling unit (the base station MAC scheduler – Figs. 1/106, 11, column 21, line 57) configured to determine a request for change of a maximum channel capacity allocated to said at least one of said plurality of channels (the base

station MAC scheduler allocates the available bandwidth between the various services depending upon the priorities and rules imposed by their quality of service – Fig. 11, column 21, lines 53 – 62. In determining the amount of bandwidth to allocate a particular QoS for a particular CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56),

but, is silent on, “if a value of said monitored predetermined parameter falls outside a predetermined allowed range”.

Scholefield teaches in detail, if a value of said monitored predetermined parameter falls outside a predetermined allowed range (the message communicates a minimum QOS grade/priority for incoming traffic, so as to prevent more than peak loading of the access and/or traffic channels – Figs. 7, 8, column 6, lines 31 – 49).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify self-correcting bandwidth request/grant protocol of Zimmerman (Zimmerman, base station 106, Fig. 1/106), would have been incorporated an allocation/access request, the system infrastructure determines from the access request whether to allocate the subchannels to the subscriber unit of Scholefield (Scholefield, Fig. 1, column 2, lines 64 – 67), for an improved

access procedure to accommodate multiple priority requests in an efficient manner, that allows for quicker access times as the priority of the data traffic increases (Scholefield, ABSTRACT, column 3, lines 3 – 6).

Regarding claim 2, Zimmerman discloses,

a device according to claim 1, wherein said maximum channel capacity corresponds to a maximum allowed data rate (the base station responds quickly to requests for more bandwidths for a constant bit rate service, the uplink bandwidth allocation to a constant bit rate service that is not currently operating at a MAXIMUM rate is made sufficiently large to accommodate the service's current rate and a bandwidth request – Fig. 4, column 15, lines 50 – 58. The TDM connections not already at maximum bandwidth are allocating enough extra bandwidth in the uplink to piggyback a request for additional bandwidth – column 22, lines 64 – 67, column 25, lines 6 – 23, reads on the claimed feature, wherein maximum channel capacity corresponding to a maximum allowed data rate).

Regarding claim 3, Zimmerman discloses,

a device according to claim 2, wherein said maximum allowed data rate is set by a maximum transport format combination (the base station responds quickly to requests for more bandwidths for a constant bit rate service, the uplink bandwidth

allocation to a constant bit rate service that is not currently operating at a MAXIMUM rate is made sufficiently large to accommodate the service's current rate and a bandwidth request – Fig. 4, column 15, lines 50 – 58. The TDM connections not already at maximum bandwidth are allocating enough extra bandwidth in the uplink to piggyback a request for additional bandwidth – column 22, lines 64 – 67, column 25, lines 6 – 23. The base station 106 receives the bandwidth request and grants bandwidth requests, and the base station monitors the appropriate bandwidth request contentions slots – ABSTRACT, Fig. 8/814, column 20, lines 13 – 34, reads on the claimed feature, maximum transport format combination).

Regarding claim 4, Zimmerman discloses,

a device according to claim 1, wherein said monitoring unit is configured to derive said value of said predetermined parameter by decoding a transport format combination indication information provided in said received data stream (the base station 106 receives the bandwidth request and grants bandwidth requests, and the base station monitors the appropriate bandwidth request contentions slots – ABSTRACT, Fig. 8/814, column 20, lines 13 – 34, also, Figs. 3, 4, column 11, lines 6 – 58, reads on the claimed feature, decoding a transport format combination indication information received data stream).

Regarding claim 5, Zimmerman discloses,

a device according to **claim 1**, wherein said scheduling unit (the base station MAC scheduler – Figs. 1/106, 11, column 21, line 57) is configured to check available recourses (the base station MAC scheduler allocates the available bandwidth between the various services depending upon the priorities and rules imposed by their quality of service – Fig. 11, column 21, lines 53 – 62. In determining the amount of bandwidth to allocate a particular QoS for a particular CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56) and to reject said determined request in response to the checking result (variations in bandwidth requirements - i.e., increases or **decreases** to bandwidth requirements are necessary for all services transported by the system 100 with the exception of uncompressible constant bit rate, or continuous grant CG services – Fig. 6/614, column 13, lines 35 – 49, column 16, lines 52 – 66, column 27, lines 2 – 23. If the sufficient bandwidth is available, the requested bandwidth is granted to the connection, else the base station waits for sufficient bandwidth to become available before granting the request – column 4, lines 2 – 5. If there is insufficient bandwidth available to the CPE 110 as determined by the base station's LL-MAA 506, **the bandwidth request will not be granted** – Fig. 5, column 16, lines 16 - 18).

Regarding claim 6, Zimmerman discloses,

a device according to claim 1, wherein said scheduling unit (the base station MAC scheduler – Figs. 1/106, 11, column 21, line 57) is configured to check available resources and to increase (variations in bandwidth requirements - i.e., **increases** or decreases to bandwidth requirements are necessary for all services transported by the system 100 with the exception of uncompressible constant bit rate, or continuous grant CG services – Fig. 6/614, column 13, lines 35 – 49, column 16, lines 52 – 66, column 27, lines 2 - 23) said maximum channel capacity to a value smaller than said value of said monitored predetermined parameter in response to the checking result, if said request has been determined (the bandwidth allocation synchronization between CPEs and base stations is performed by periodically transmitting aggregate bandwidth request. The self-correcting bandwidth request/grant protocol has four-one incremental bandwidth request-aggregate bandwidth request pattern. Here, to increase maximum channel capacity to a value smaller than or equal to monitored parameter is the design and/or engineering and/or capacity choice – column 31, lines 1 – 37).

Regarding claim 7, Zimmerman discloses,

a device according to claim 1, wherein said scheduling unit (the base station MAC scheduler – Figs. 1/106, 11, column 21, line 57) is configured to check the available resources and to increase (variations in bandwidth requirements - i.e., **increases** or decreases to bandwidth requirements are necessary for all services transported by the system 100 with the exception of uncompressible constant bit rate, or continuous grant CG services – Fig. 6/614, column 13, lines 35 – 49, column 16, lines 52 – 66, column 27, lines 2 - 23) said maximum channel capacity to said value of said monitored predetermined parameter in response to the checking result, if said request has been determined (the bandwidth allocation synchronization between CPEs and base stations is performed by periodically transmitting aggregate bandwidth request. The self-correcting bandwidth request/grant protocol has four-one incremental bandwidth request-aggregate bandwidth request pattern. Here, to increase maximum channel capacity to a value smaller than or equal to monitored parameter is the design and/or engineering and/or capacity choice – column 31, lines 1 – 37).

Regarding claim 8, Zimmerman discloses,

a device according to claim 5, wherein said scheduling unit is configured to repeat said checking at a predetermined timing (upon receipt of aggregate requests, the base stations reset their records to correctly reflect the current bandwidth requirements of associated CPES. Periodic use provides a self-

correcting bandwidth allocation protocol yet without the bandwidth overhead associated with the protocols. Here, the base station receives the bandwidth request at predetermined time period, reads on the claimed feature, monitoring for a predetermined time period and determines the number of transmission time intervals, as the base station monitors the appropriate bandwidth request contentions slots at those predetermined time period – ABSTRACT, Figs. 1, 13, column 26, lines 46 – 65, column 31, lines 1 - 17).

Regarding claim 9, Zimmerman discloses,

a device according claim 1, wherein said plurality of channels are dedicated uplink channels of a radio access network (the bandwidth requests can be piggybacked on uplink bandwidth already allotted and currently being used by a data service – Fig. 1, 4 column 7, lines 7 – 17, column 11, lines 42 - 58).

Regarding claim 10, Zimmerman discloses,

a device according to claim 1, wherein said scheduling unit comprises is a base station device (the base station MAC scheduler – Figs. 1/106, 11, and column 21, line 57).

Regarding claim 11, Zimmerman discloses,

a terminal device for transmitting data via at least one data channel to a data network apparatus (self correcting bandwidth request/grant protocol in a broadband wireless communication system – ABSTRACT, Fig. 1/106, column 9, lines 1 – 13. The broadband wireless communication system 100 provides "bandwidth-on-demand" to the plurality of Customer Premises Equipment CPEs 110 – Fig. 1, column 2, lines 17 – 19, column 9, lines 27 – 29), said terminal device being configured to set a predetermined parameter indicating a channel capacity to a value outside a predetermined allowed range (the base station 106 receives the bandwidth request and grants bandwidth requests and the base station monitors the appropriate bandwidth request contentions slots. The base station 106 checks for the available bandwidth and performs the bandwidth allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth. The amount of bandwidth dedicated to a given service is determined by the information rate and the quality of service required by that service and also taking into account bandwidth availability and other system parameters – Figs. 1, 8/804, column 2, lines 17 - 28. Here, the base station 106 keeps monitoring on the available bandwidth – ABSTRACT, Figs. 8/804, 8/814, 8/822, 11, 12, 13, column 20, lines 13 – 34, column 21, lines 26 – 51. In determining the amount of bandwidth to allocate a particular QoS for a particular CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to

keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56),

but, is silent on, "in order to request a change of the maximum channel capacity".

Scholefield teaches in detail, in order to request a change of the maximum channel capacity (the message communicates a minimum QOS grade/priority for incoming traffic, so as to prevent more than peak loading of the access and/or traffic channels – Figs. 7, 8, column 6, lines 31 – 49).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify self-correcting bandwidth request/grant protocol of Zimmerman (Zimmerman, base station 106, Fig. 1/106), would have been incorporated an allocation/access request, the system infrastructure determines from the access request whether to allocate the subchannels to the subscriber unit of Scholefield (Scholefield, Fig. 1, column 2, lines 64 – 67), for an improved access procedure to accommodate multiple priority requests in an efficient manner, that allows for quicker access times as the priority of the data traffic increases (Scholefield, ABSTRACT, column 3, lines 3 – 6).

Regarding claim 12, Zimmerman discloses,

a terminal device according to claim 11, wherein said value is selected from a predetermined temporary range comprising values higher than said allowed range (self correcting bandwidth request/grant protocol in a broadband wireless communication system – ABSTRACT, Fig. 1/106, column 9, lines 1 – 13. The broadband wireless communication system 100 provides “bandwidth-on-demand” to the plurality of Customer Premises Equipment CPEs 110 – Fig. 1, column 2, lines 17 – 19, column 9, lines 27 – 29. The bandwidth allocation synchronization between CPEs and base stations is performed by periodically transmitting aggregate bandwidth request. The self-correcting bandwidth request/grant protocol has four-one incremental bandwidth request-aggregate bandwidth request pattern. Here, requesting higher than allowed value or to request the maximum available capacity is the design and/or engineering and/or capacity choice – column 31, lines 1 – 37).

Regarding claim 13, Zimmerman discloses,

a terminal device according to claim 12, wherein the use of said; value of said temporary range is restricted to a predetermined time period (the base station MAC scheduler allocates the available bandwidth between the various services depending upon the priorities and rules imposed by their quality of service – Fig. 11, column 21, lines 53 – 62. In determining the amount of bandwidth to allocate

a particular QoS for a particular CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56. The base station 106 receives the bandwidth request and grants bandwidth requests, and the base station monitors the appropriate bandwidth request contentions slots. Here, it is understood that due to system capacity and engineering design choice, that the value of range is restricted to a predetermined time period, so after the time expires, the system can reallocate the resources to other users – ABSTRACT, Fig. 8/814, column 20, lines 13 – 34).

Regarding claim 14, it is similar to claim 8 above, and is rejected on the same grounds.

Regarding claim 15, it is similar to claim 2 above, and is rejected on the same grounds.

Regarding claim 16, it is similar to claim 3 above, and is rejected on the same grounds.

Regarding claim 17, Zimmerman discloses,

a terminal device according to claims 11, wherein, said terminal device is a

cellular terminal device (the base station 106 receives the bandwidth request and grants bandwidth requests and the base station monitors the appropriate bandwidth request contentions slots. The base station 106 checks for the available bandwidth and performs the bandwidth allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth. The amount of bandwidth dedicated to a given service is determined by the information rate and the quality of service required by that service and also taking into account bandwidth availability and other system parameters – Figs. 1, 8/804, column 2, lines 17 - 28).

Regarding claim 18, Zimmerman discloses,

a scheduling method of scheduling data transmission over a plurality of channels in a data network (self correcting bandwidth request/grant protocol in a broadband wireless communication system – ABSTRACT, Fig. 1/106, column 9, lines 1 – 13. The broadband wireless communication system 100 provides "bandwidth-on-demand" to the plurality of Customer Premises Equipment CPEs 110 – Fig. 1, column 2, lines 17 – 19, column 9, lines 27 - 29), said method comprising:

a) monitoring a predetermined parameter indicating a channel capacity in a received data stream of at least one of said plurality of channels (the base station

106 receives the bandwidth request and grants bandwidth requests reads on the claimed “monitoring unit”, the base station monitors the appropriate bandwidth request contentions slots – ABSTRACT, Fig. 8/814, column 20, lines 13 – 34. The bandwidth allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth – Figs. 8/822, 11, 12, 13, column 20, lines 29 – 34, column 21, lines 26 – 51. The base station 106 receives the bandwidth request and grants bandwidth requests and the base station monitors the appropriate bandwidth request contentions slots. The base station 106 checks for the available bandwidth and performs the bandwidth allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth. The amount of bandwidth dedicated to a given service is determined by the information rate and the quality of service required by that service and also taking into account bandwidth availability and other system parameters – Figs. 1, 8/804, column 2, lines 17 - 28. Here, the base station 106 keeps monitoring on the available bandwidth – ABSTRACT, Figs. 8/804, 8/814, 8/822, 11, 12, 13, column 20, lines 13 – 34, column 21, lines 26 – 51. In determining the amount of bandwidth to allocate a particular QoS for a particular CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56; and

b) determining a request for change of the maximum channel capacity allocated to said at least one of said plurality of channels (the base station MAC scheduler

– Figs. 1/106, 11, column 21, line 57. The base station MAC scheduler allocates the available bandwidth between the various services depending upon the priorities and rules imposed by their quality of service – Fig. 11, column 21, lines 53 – 62. In determining the amount of bandwidth to allocate a particular QoS for a particular CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56),

but, is silent on, “if a value of said monitored predetermined parameter falls outside a predetermined allowed range”.

Scholefield teaches in detail, if a value of said monitored predetermined parameter falls outside a predetermined allowed range (the message communicates a minimum QOS grade/priority for incoming traffic, so as to prevent more than peak loading of the access and/or traffic channels – Figs. 7, 8, column 6, lines 31 – 49).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify self-correcting bandwidth request/grant protocol of Zimmerman (Zimmerman, base station 106, Fig. 1/106), would have been incorporated an allocation/access request, the system infrastructure determines from the access request whether to allocate the subchannels to the subscriber

unit of Scholefield (Scholefield, Fig. 1, column 2, lines 64 – 67), for an improved access procedure to accommodate multiple priority requests in an efficient manner, that allows for quicker access times as the priority of the data traffic increases (Scholefield, ABSTRACT, column 3, lines 3 – 6).

Regarding claim 19, it is similar to claim 2 above, and is rejected on the same grounds.

Regarding claim 20, it is similar to claim 3 above, and is rejected on the same grounds.

Regarding claim 21, it is similar to claim 4 above, and is rejected on the same grounds.

Regarding claim 22, it is similar to claim 5 above, and is rejected on the same grounds.

Regarding claim 23, it is similar to claim 6 above, and is rejected on the same grounds.

Regarding claim 24, it is similar to claim 7 above, and is rejected on the same grounds.

Regarding claim 25, it is similar to claim 8 above, and is rejected on the same grounds.

Regarding claim 26, Zimmerman discloses,

a system for scheduling data transmission over a plurality of channels in a data network (self correcting bandwidth request/grant protocol in a broadband wireless communication system – ABSTRACT, Fig. 1/106, column 9, lines 1 – 13. The broadband wireless communication system 100 provides "bandwidth-on-demand" to the plurality of Customer Premises Equipment CPEs 110 – Fig. 1, column 2, lines 17 – 19, column 9, lines 27 - 29), said system comprising:

a terminal device (the broadband wireless communication system 100 provides "bandwidth-on-demand" to the plurality of Customer Premises Equipment CPEs 110 – Fig. 1, column 2, lines 17 – 19, column 9, lines 27 – 29) for transmitting data via at least one data channel to a data network, said terminal device being configured to set a predetermined parameter indicating a channel capacity to a value outside a predetermined allowed range, in order to request a change of the maximum channel capacity (the base station 106 receives the bandwidth request and grants bandwidth requests and the base station monitors the appropriate bandwidth request contentions slots. The base station 106 checks for the

available bandwidth and performs the bandwidth allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth. The amount of bandwidth dedicated to a given service is determined by the information rate and the quality of service required by that service and also taking into account bandwidth availability and other system parameters – Figs. 1, 8/804, column 2, lines 17 - 28. Here, the base station 106 keeps monitoring on the available bandwidth– ABSTRACT, Figs. 8/804, 8/814, 8/822, 11, 12, 13, column 20, lines 13 – 34, column 21, lines 26 – 51. In determining the amount of bandwidth to allocate a particular QoS for a particular CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56); and

a scheduling device (the base station MAC scheduler – Figs. 1/106, 11, column 21, line 57) for scheduling data transmission over a plurality of channels in the data network (the base station MAC scheduler allocates the available bandwidth between the various services depending upon the priorities and rules imposed by their quality of service – Fig. 11, column 21, lines 53 – 62. In determining the amount of bandwidth to allocate a particular QoS for a particular CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56),

a scheduling device including a monitoring unit (the base station 106 receives the bandwidth request and grants bandwidth requests reads on the claimed “monitoring unit”, the base station monitors the appropriate bandwidth request contentions slots – ABSTRACT, Fig. 8/814, column 20, lines 13 – 34) configured to monitor the predetermined parameter in a received data stream of the at least one data channel, and a scheduling unit configured to determine a request for change of the maximum channel capacity (the bandwidth allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth – Figs. 8/822, 11, 12, 13, column 20, lines 29 – 34, column 21, lines 26 – 51. The base station 106 receives the bandwidth request and grants bandwidth requests and the base station monitors the appropriate bandwidth request contentions slots. The base station 106 checks for the available bandwidth and performs the bandwidth allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth. The amount of bandwidth dedicated to a given service is determined by the information rate and the quality of service required by that service and also taking into account bandwidth availability and other system parameters – Figs. 1, 8/804, column 2, lines 17 - 28. Here, the base station 106 keeps monitoring on the available bandwidth, reads on the claimed feature, monitoring a difference between a used capacity allocation and a scheduled capacity allocation in a received data stream – ABSTRACT, Figs. 8/804, 8/814, 8/822, 11, 12, 13, column 20, lines 13 – 34, column 21, lines 26 – 51. In determining the amount of bandwidth to allocate a particular QoS for a particular

CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56),

but, is silent on, “if a value of the monitored predetermined parameter falls outside a predetermined allowed range”.

Scholefield teaches in detail, if a value of the monitored predetermined parameter falls outside a predetermined allowed range (the message communicates a minimum QOS grade/priority for incoming traffic, so as to prevent more than peak loading of the access and/or traffic channels – Figs. 7, 8, column 6, lines 31 – 49).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify self-correcting bandwidth request/grant protocol of Zimmerman (Zimmerman, base station 106, Fig. 1/106), would have been incorporated an allocation/access request, the system infrastructure determines from the access request whether to allocate the subchannels to the subscriber unit of Scholefield (Scholefield, Fig. 1, column 2, lines 64 – 67), for an improved access procedure to accommodate multiple priority requests in an efficient manner, that allows for quicker access times as the priority of the data traffic increases (Scholefield, ABSTRACT, column 3, lines 3 – 6).

Regarding claim 27, Zimmerman discloses,

a scheduling device for scheduling data transmission over a plurality of channels in a data network (self correcting bandwidth request/grant protocol in a broadband wireless communication system – ABSTRACT, Fig. 1/106, column 9, lines 1 – 13. The broadband wireless communication system 100 provides “bandwidth-on-demand” to the plurality of Customer Premises Equipment CPEs 110 – Fig. 1, column 2, lines 17 – 19, column 9, lines 27 – 29), said scheduling device comprising:

monitoring means (the base station 106 receives the bandwidth request and grants bandwidth requests reads on the claimed “monitoring means”, the base station monitors the appropriate bandwidth request contentions slots – ABSTRACT, Fig. 8/814, column 20, lines 13 – 34) for monitoring a predetermined parameter indicating a channel capacity in a received data stream of at least one of the plurality of channels (the bandwidth allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth – Figs. 8/822, 11, 12, 13, column 20, lines 29 – 34, column 21, lines 26 – 51. The base station 106 receives the bandwidth request and grants bandwidth requests and the base station monitors the appropriate bandwidth request contentions slots. The base station 106 checks for the available bandwidth and performs the bandwidth

allocation algorithm to allocate bandwidth to the CPE that had requested bandwidth. The amount of bandwidth dedicated to a given service is determined by the information rate and the quality of service required by that service and also taking into account bandwidth availability and other system parameters – Figs. 1, 8/804, column 2, lines 17 - 28. Here, the base station 106 keeps monitoring on the available bandwidth, reads on the claimed feature, monitoring a predetermined parameter indicating a channel capacity in a received data stream – ABSTRACT, Figs. 8/804, 8/814, 8/822, 11, 12, 13, column 20, lines 13 – 34, column 21, lines 26 – 51); and

scheduling means (the base station MAC scheduler – Figs. 1/106, 11, column 21, line 57) for determining a request for change of a maximum channel capacity allocated to the at least one of the plurality of channels (the base station MAC scheduler allocates the available bandwidth between the various services depending upon the priorities and rules imposed by their quality of service – Fig. 11, column 21, lines 53 – 62. In determining the amount of bandwidth to allocate a particular QoS for a particular CPE, the base station takes into account the QoS, modulation, and the fairness criteria used to keep an individual CPE from using up all available bandwidth – column 7, lines 44 – 56),

but, is silent on, “if a value of the monitored parameter falls outside of a predetermined allowed range”.

Scholefield teaches in detail, if a value of the monitored parameter falls outside of a predetermined allowed range (the message communicates a minimum QOS grade/priority for incoming traffic, so as to prevent more than peak loading of the access and/or traffic channels – Figs. 7, 8, column 6, lines 31 – 49).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify self-correcting bandwidth request/grant protocol of Zimmerman (Zimmerman, base station 106, Fig. 1/106), would have been incorporated an allocation/access request, the system infrastructure determines from the access request whether to allocate the subchannels to the subscriber unit of Scholefield (Scholefield, Fig. 1, column 2, lines 64 – 67), for an improved access procedure to accommodate multiple priority requests in an efficient manner, that allows for quicker access times as the priority of the data traffic increases (Scholefield, ABSTRACT, column 3, lines 3 – 6).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Vincent teaches, modular scalable packet scheduler with rate based shaping and virtual port scheduler.
   US Patent: US 6,359,884 B1 Mar. 19, 2002.

2. Chen teaches, method for reverse link rate scheduling at various level like – the base station level scheduling, system level scheduling and network level scheduling.

US Patent: US 5,923,650 Jul. 13, 1999.

3. Webster teaches, blind signal separation and equalization of full-duplex amplitude modulated signals on a signal transmission line.

   US Patent: 5,500,879 Mar. 19, 1996.

4. Sheffer teaches, tracking system for tracking a movable object carrying a cellular phone unit, an integrated personal protection system incorporating the tracking system.

   US Patent: 5,515,419 May 7, 1996.

5. Anderson teaches, wireless communication method and system, where, the base station 104 commands the user station 102 to increase or decrease its data rate.

   US Patent: 6,112,080 Aug. 29, 2000.

6. Arviv teaches, asymmetric adaptive modulation in a wireless communication system, adaptive modulation being performed by the base station and CPEs.
   US Patent: 6,549,759 B2 Apr. 15, 2003.

Contact Information

Any inquiry concerning this communication from the examiner should be directed to Nimesh Patel at (571) 270-1228, normally reached on Mon-Thur. 6:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael, Perez-Gutierrez, can be reached at (571) 272-7915.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR of Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from USPTO Customer Service

Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nimesh Patel/

/Rafael Pérez-Gutiérrez/

Supervisory Patent Examiner, Art Unit 2617